

Appl. No. 10/590,644
Amdt. Dated 8/10/2010
Response to Office action dated 5/17/2010

SoCal IP
Law Group LLP

Amendments to the Drawings:

Please replace sheets 5 and 6 of the drawings with the attached replacement sheets.

REMARKS

No claims have been amended or cancelled, and no new claims have been added. Claims 1-5 are pending.

Priority

The first heading and the first paragraph of the specification have been amended to properly recite a claim for priority to International Patent Application PCT/JP2005/2156 and Japanese Patent Application No. 2004-055280. This response is accompanied by a petition to accept an unintentionally delayed priority claim.

Allowable Subject Matter

The Examiner objected to claims 3-5 as depending upon a rejected base claim, but allowable if rewritten in independent form including all limitations of the base claims and any intervening claims. The indication of allowable subject matter is greatly appreciated.

Objections to the Drawings

The Examiner objected to Figures 6 and 7 as lacking a legend such as "Prior Art" because only that which is old is illustrated under 37 CFR § 1.84. Substitute drawing sheets bearing the suggested legend are enclosed.

Claim Rejections - 35 USC § 102

The Examiner rejected claims 1 and 2 under 35 USC § 102(b) as anticipated by *Black et al.* (US 6,157,271). This rejection is respectfully traversed.

The fundamental principle of claim rejections under 35 USC § 102 is stated in MPEP §2131 as follows:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference.

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The rejection of claim 1 is respectfully traversed on the grounds that *Black* does not expressly or inherently describe the element “a controlling unit that switches at a predetermined timing to enable/disable the phase difference signal supplied from the phase comparator to the low pass filter”.

Black describes a phase-locked loop including a phase comparator (phase detector 102), a low pass filter (LPF) 112, a voltage-controller oscillator (VCO) 114, and a frequency divider 438 to divide the frequency of the output 116 from the VCO to provide a comparison signal 107 to the phase comparator. Thus the phase-locked loop of *Black* includes many elements similar to some of the elements recited in claim 1. However, *Black* does not describe any element that disables the output from the phase comparator or disconnects the output of the phase comparator from the input to the LPF.

In the rationale for the rejection of claim 1, the Examiner (referring to figure 3 of *Black*) asserts “A predetermined boost/supply signal is used to allow rapid stabilization of the oscillator as the PLL is disabled (open). ... When the applied potential is set to the loop the phase detector and inherent pump current is not applied and thus is at high impedance (open).” The Applicant respectfully, but emphatically, disagrees.

In the rationale for the rejection of claim 1, the Examiner attempts to inappropriately equate the terms “open” and “disabled”. The Applicant acknowledges that the output from a disabled phase detector may be an open circuit continuously for the duration that the phase detector is disabled. However, the output from an enabled charge-pump phase detector may also be an open circuit for portions of the cycle time of the input signal 104 and the feedback signal

107. Thus “open” and “disabled” are not equivalent terms.

Black describes a VCO for use in GSM communications systems which have mutually conflicting requirements for very good stability and fast tuning rates (90 Hz accuracy for 100 mHz frequency steps in less than 200 microseconds). One possible solution described by *Black* is shown in figure 3. In this solution, a frequency step is accomplished by changing a division ratio of a frequency divider 118 simultaneously with changing a tuning voltage 314. However, *Black* does not disclose, suggest, or provide any reason to presume that the phase detector output is disabled as the frequency is stepped. *Black* does not contain the term “disabled” and does not use the term “open” to describe the output of the phase detector.

The VCO recited in claim 1 is designed to reduce the electromagnetic interference (EMI) generated by electronic equipment clocked at the frequency of the VCO output. In contrast to the VCO of *Black*, the VCO recited in claim 1 includes a controlling unit that periodically disables the output of the phase detector to deliberately cause the frequency of the VCO to drift within a range, thus spreading the spectrum of the EMI.

Since *Black* does not expressly or inherently describe “a controlling unit that switches at a predetermined timing to enable/disable the phase difference signal supplied from the phase comparator to the low pass filter” as recited in claim 1, it is respectfully submitted that claim 1 and depending claims 2-5 are allowable. Withdrawal of the rejection is solicited.

Disclaimers Relating to Claim Interpretation and Prosecution History Estoppel

Any reference herein to “the invention” is intended to refer to the specific claim or claims being addressed herein. The claims of this application are intended to stand on their own and are not to be read in light of the prosecution history of any related or unrelated patent or patent application. Furthermore, no arguments in any prosecution history relate to any claim in this application, except for arguments specifically directed to the claim.

Conclusion

It is submitted that the independent and dependent claims include other significant and substantial recitations which are not disclosed in the cited references. Thus, the claims are also patentable for additional reasons. However, for economy the additional grounds for patentability are not set forth here.

The Examiner's consideration of the references of record is appreciated. It is presumed that the Examiner has considered the entire disclosure of each of the references of record with respect to anticipation (individually) and obviousness (in any combination).

In view of all of the above, it is respectfully submitted that the present application is now in condition for allowance. Reconsideration and reexamination are respectfully requested and allowance at an early date is solicited.

The Examiner is invited to call the undersigned registered practitioner to answer any questions or to discuss steps necessary for placing the application in condition for allowance.

References to "Applicant" herein are to the assignee of record, which the undersigned represents. An assignment has been recorded, and a Statement of Ownership and a General Power of Attorney have also been filed. Thus, the rights of the original Applicants/inventors have been excluded.

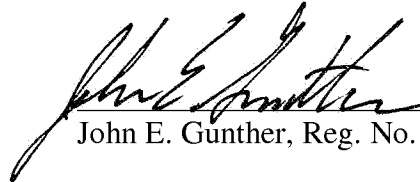
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With respect to this filing, the Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 503456. Please consider this paper to be a petition for extension of time, if necessary.

Respectfully submitted,

Date: August 10, 2010



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